


HV  
551.4  
.N8  
P.46  
1984



HV551.4.V8 P46 1984

PENDER COUNTY  
EMERGENCY MANAGEMENT  
HURRICANE RESPONSE PLAN

JUNE 1984

## TABLE OF CONTENTS

	<u>Page Number</u>
RECORD OF CHANGES .....	ii
I. AUTHORITIES .....	1
II. REFERENCES .....	1
III. PURPOSE AND SCOPE .....	1
IV. ORGANIZATION .....	1
V. CONCEPT OF OPERATIONS .....	3
VI. WARNING AND ALERTING SYSTEM .....	4
VII. INCREASED READINESS ACTION CHECKLIST .....	4
VIII. EVACUATION AREAS, ROUTES AND SHELTER LOCATION .....	5
IX. REENTRY .....	7
X. RESPONSIBILITIES .....	8
Local .....	8
State and Federal Agencies .....	8
XI. COMMUNICATIONS .....	8
XII. PUBLIC INFORMATION .....	9
XIII. EXERCISES .....	9
XIV. APPROVAL .....	10

Attachment 1 - Line of Succession

Attachment 2 - Warning and Alerting Flow Chart

Attachment 3 - Increased Readiness Action Checklist

Attachment 4 - Conditions/Actions Flow Chart

Attachment 5 - Evacuation Areas, Routes and Shelter Locations - Map

Attachment 6 - EBS Announcement

Attachment 7 - Hurricane Evacuation Decision Procedure

## RECORD OF CHANGES

[illegible]

I. Authorities:

- A. North Carolina General Statutes, Chapter 166A.
- B. Emergency Management Ordinance for Pender County.

II. Reference:

- A. North Carolina Disaster Relief and Assistance Plan (NCDR&AP).
- B. Pender County Disaster Relief and Assistance Plan (PCDR&AP).
- C. Pender County - American National Red Cross Agreement with Carolinas Division, ANRC, dated April 19, 1977.
- D. Pender County - Pender County Public Schools Shelter Agreement, dated June, 1974.

III. Purpose and Scope:

- A. Purpose - This Plan has been developed to provide for an orderly and coordinated evacuation to minimize the effects of hurricanes on residents and visitors in Pender County. The Plan provides for the alerting of selected officials, the evacuation of the public from danger areas and designation of shelters for evacuees. It also provides for reentry into evacuated areas when the threat to persons is ended.
- B. Scope - This Plan is designed for use in hurricane situations. This Plan constitutes annex O to the Pender County Disaster Relief and Assistance Plan (PCDR&AP).

IV. Organization:

- A. Hurricane evacuation involves both areas under county jurisdiction and municipal jurisdiction. As joint action is required of county and municipal governments, a joint organization for decision making and use of resources is needed. For these purposes, a Control Group and a Support Group are hereby established.
- B. Control Group
  - 1. Mission - To exercise overall direction and control of hurricane evacuation operations including decisions to institute county-wide increased readiness conditions and such other actions deemed necessary due to the situation.

2. Composition

- a. The Chairman of the Pender County Board of Commissioners - Group Chairman.
- b. The Mayors or their representatives of:
  - Surf City
  - Topsail Beach
  - Burgaw
  - Atkinson
- c. The Pender County Emergency Management Coordinator - Advisor.
- d. The County Attorney - Legal Advisor.

3. Line of Succession - In the event that any of the members of the Control Group are not available, each primary member will be succeeded by alternates who will have the responsibility and authority of the primary member (See Attachment 1).

C. Support Group

1. Mission - To provide personnel and material resources for the implementation of preplanned actions and actions as directed by the Control Group; provide direction to personnel engaged in operations; and, to provide information, data, and recommendations to the Control Group.

2. Composition

- a. County Finance Officer - Group Chief
- b. Sheriff
- c. Director of Social Services
- d. Superintendent of Schools
- e. County Health Director
- f. County Tax Supervisor
- g. Burgaw Fire Chief
- h. County Public Information Officer
- i. Rescue Squad Representative
- j. State Highway Patrol Liaison Officer
- k. Red Cross Liaison Officer

- D. The Control and Support Groups will be co-located in the Pender County Emergency Operating Center (EOC) to facilitate coordination.

In the event it becomes necessary to move the groups to an alternate EOC location, the new location will be announced.

FIRST ALTERNATE - Commissioners' Room, Burgaw, Administration Building.  
SECOND ALTERNATE - Pender County Facility Building.

V. Concept of Operations:

The concept for hurricane evacuation in Pender County calls for:

- A. Early alerting of officials and concerned agencies in the entire county.
- B. Overall direction and decision making by the Control Group.
- C. Increased readiness actions taken progressively as the hurricane approaches and as the threat of injury and damage increases.
- D. Evacuation of residents and visitors on beaches and in threatened low-lying areas upon decision of the Control Group.
- E. Movement of evacuees out of the county or if necessary to designated and operating public shelters. Primary shelters will normally be open first and secondary shelters will be opened only if necessary and required. (See paragraph VIII of this Plan).
- F. Mass care for evacuees in predesignated shelters in accordance with agreements.
- G. Reentry of evacuees to evacuated areas when authorized by the Control Group and when the hurricane threat has passed or damage assessments indicate that reentry is feasible.
- H. Local governments request State and/or Federal assistance, as necessary through the State EOC or if the State Emergency Response Team (SERT) is activated as directed by SERT.
- I. The submission of damage assessment reports within 48 hours of the passing of the hurricane, (See annex F of the Pender County Disaster Relief and Assistance Plan) to State EOC or to the SERT if it is activated, as directed.
- J. When SERT is established (to the satisfaction of the SERT Operations Officer), the State will assume responsibility for directing State agency participation in emergency operations and coordinating actions involving both State and local agencies. The exact time at which the State will assume direction and control is when SERT dispatches a message to each county concerned, the State EOC, and the State Warning Point. This message will state that:

1. Option A - At the request of the county or counties concerned, SERT has been established and assumes direction and control authority effective at the specified date and time, or;
2. Option B - A State of Disaster or Emergency has been declared, the SERT has been established and assumes direction and control authority effective at the specified date and time.
3. NOTE: When a State of Disaster or Emergency is declared by the Governor, the State has the authority to assume responsibility for Directing and conducting emergency operations. This is not meant to negate local governments' continuing responsibility to protect the people prior to the arrival and establishment of SERT as described above.

VI. Warning and Alert Systems:

The system for dissemination of hurricane watches and warnings and for notification of departments and populace that the evacuation plan will be executed, is shown as a flow chart. (See Attachment 2).

VII. Increased Readiness Action Checklist: (See Attachment 3 - Checklist, and Attachment 4 - Condition/Action Flow Chart).

A. The following increased readiness conditions are established:

Condition 5	Hurricane Season (June 1 - November 30)
Condition 4	Alert - Hurricane Advisory
Condition 3	Hurricane Watch or approximately 36 to 48 hours to forecasted landfall
Condition 2	Hurricane Warning or approximately 18 to 24 hours to forecasted landfall
Condition 1	24 Hours or less to forecasted landfall
Condition 0	Landfall
Reentry	Threat removed or damage assessment allows

B. The Control Group will declare the condition after coordination with the National Weather Service. The Support Group will implement actions for each condition when announced.

NOTE: In the eventuality of a pre-season hurricane, it may be necessary to first institute a condition of readiness other than Condition 5. Under peculiar circumstances it



may be necessary to skip a condition and go directly into a more advanced condition. This means that all of the actions required in the declared condition must be completed in the available time. The increased readiness conditions as stated above should remain standard, but the timing of the required actions may vary depending on the situation involved.

VIII. Evacuation Areas, Routes and Shelter Location: (See Attachment 5)

A. General

1. Under a hurricane warning condition (see Attachment 3 - Increased Readiness Condition Checklist) the populace of the county will be advised to evacuate all barrier islands and low-lying areas of the mainland and move well inland emphasizing that shelter space in the county is limited. (See Attachment 6)
2. The locations of primary shelters are shown on Attachment 5. Secondary shelters are not shown on Attachment 5.
3. Normally primary shelters are opened first and secondary shelters are opened only after it becomes apparent that the primary shelters will not accommodate the number of persons requiring shelter.
4. Manning of the primary shelters (and the secondary shelters if it becomes necessary - if needed) is the responsibility of the local chapter of the American Red Cross supported by the Pender County Department of Social Services and school personnel.

B. Shelters

1. Primary

<u>Building Name</u>	<u>Location</u>	<u>Spaces (40 sq/ft/person)</u>
1. Topsail Jr./Sr. High School	Hampstead, NC	833
2. Topsail Elementary	Hampstead, NC	205
3. Topsail Middle School	Hampstead, NC	546
Total Spaces		1584

2. Secondary

<u>Building</u>	<u>Location</u>	<u>Spaces (40 sq/ft/person)</u>
1. Rocky Point Elem. School	Rocky Point, NC	280
2. Long Creek/Grady Elementary School	Highway #210	522
3. Burgaw Elementary School	Burgaw, NC	925
4. Burgaw Junior High School	Burgaw, NC	291
5. Pender County Court House	Burgaw, NC	373
6. Pender County Admin. Building	Burgaw, NC	116
7. Pender County Facility Building	Burgaw, NC	238
8. Pender High School	Highway #53	1765
9. Penderlea Junior High School	Penderlea, NC	628
10. Willard Elementary School	Willard, NC	283
11. West Pender Elem. School	Highway #53	265
12. Atkinson Junior High School	Atkinson, NC	481
Total Spaces		6167
<u>GRAND TOTAL SPACES</u>		<u>7751</u>

c. Evacuation Routes and Traffic Control Points (TCP)

1. Evacuation routes and traffic control points (TCP) are shown on Attachment 5.
2. Traffic control points and manning responsibilities are shown below.

<u>a. TCP</u>	<u>Manning Responsibility</u>
A	Surf City and/or Topsail Beach Police
B	Sheriff's Department and/or State Highway Patrol
C	Sheriff's Department and/or State Highway Patrol
D	Sheriff's Department and/or State Highway Patrol
E	Sheriff's Department and/or State Highway Patrol

3. The Pender County Sheriff's Department supported by the State Highway Patrol is responsible for observing low-lying areas along evacuation routes and informing the EOC if it appears such areas may become impassable.

IX. Reentry:

- A. Upon cancellation of all hurricane warnings and watches which include Pender County and when no damage has been experienced, the Control Group will authorize reentry to all evacuated areas.
- B. Prohibition of reentry and prevention of looting
  1. The Control Group will decide which areas of the county, if any, must remain evacuated, and will designate the law enforcement agency which is responsible for prohibiting reentry and for the security of property in those areas.
  2. Requests for State assistance in the prevention of reentry and prohibition of looting should be made to the State EOC or to the SERT, if it is operational.

X. Responsibilities:

A. Local

1. Control Group - Overall direction as contained in paragraph IV-B.
2. Support Group - As shown in responsibility blocks on the Increased Readiness Action Checklist, Attachment 3.
3. Pender County Emergency Management Coordinator.
  - a. Serve as advisor to the Control Group,
  - b. Coordinate actions of the Support Group and operations involving local non-government organizations and operations of forces from outside of the county.
  - c. Assist in the operation of the Pender County EOC.
  - d. Furnish Situation Reports to the State EOC.
  - e. Develop and conduct exercises to test and evaluate this Plan.

B. State and Federal Agencies

1. National Weather Service - Provides hurricane watches, warnings and related weather information.
2. U. S. Coast Guard
  - a. Provides warning to ships and boats in affected coastal areas.
  - b. Assists in coastal evacuation upon request as needed.
3. State Highway Patrol
  - a. Operates State Warning Point and passes weather information via Police Information Network (PIN).
  - b. Responsible for traffic control on State Highway Systems.
4. State Division of Emergency Management or SERT, if it is operational.
  - a. Receives requests for assistance, coordinates State actions, and arranges for assistance from Federal agencies.
  - b. Area Emergency Management Coordinator
    - (1) Assists in coordination of evacuation efforts.
    - (2) Assists in coordination of State assistance.

XI. Communications:

- A. Communications will be in accordance with Annex C, Pender County Disaster Relief and Assistance Plan (PCDR&AP).

- B. The Sheriff's Department will insure that communications between the Control and Support Groups, shelters, and traffic control points is maintained.

XII. Public Information:

- A. The Public Information Officer (PIO) (presently the County Finance Officer) will provide information to the public via the news media and otherwise based upon decisions of the Control Group to include the following:
  - 1. Precautionary/preparatory measures recommended for the public.
  - 2. Evacuation instruction. (See Attachment 6).
  - 3. Reentry instructions.
  - 4. Damage information.
- B. Warnings to the public will also be disseminated by the news media (radio, television, newspapers, and NOAA Weather radio), from Weather Service Bulletins, advisories and statements as received directly and as provided through the warning system.

XIII. Exercises:

An exercise will be conducted annually to test and evaluate this Plan.

XIV. Approval:

Submitted:

This Plan is approved by the  
undersigned:

\_\_\_\_\_  
Emergency Management Coordinator

\_\_\_\_\_  
Chairman, Pender County Board of  
Commissioners

Accepted:

\_\_\_\_\_  
Sheriff, Pender County

\_\_\_\_\_  
American National Red Cross  
Cape Fear Chapter

\_\_\_\_\_  
Mayor, Surf City

\_\_\_\_\_  
Mayor, Topsail Beach

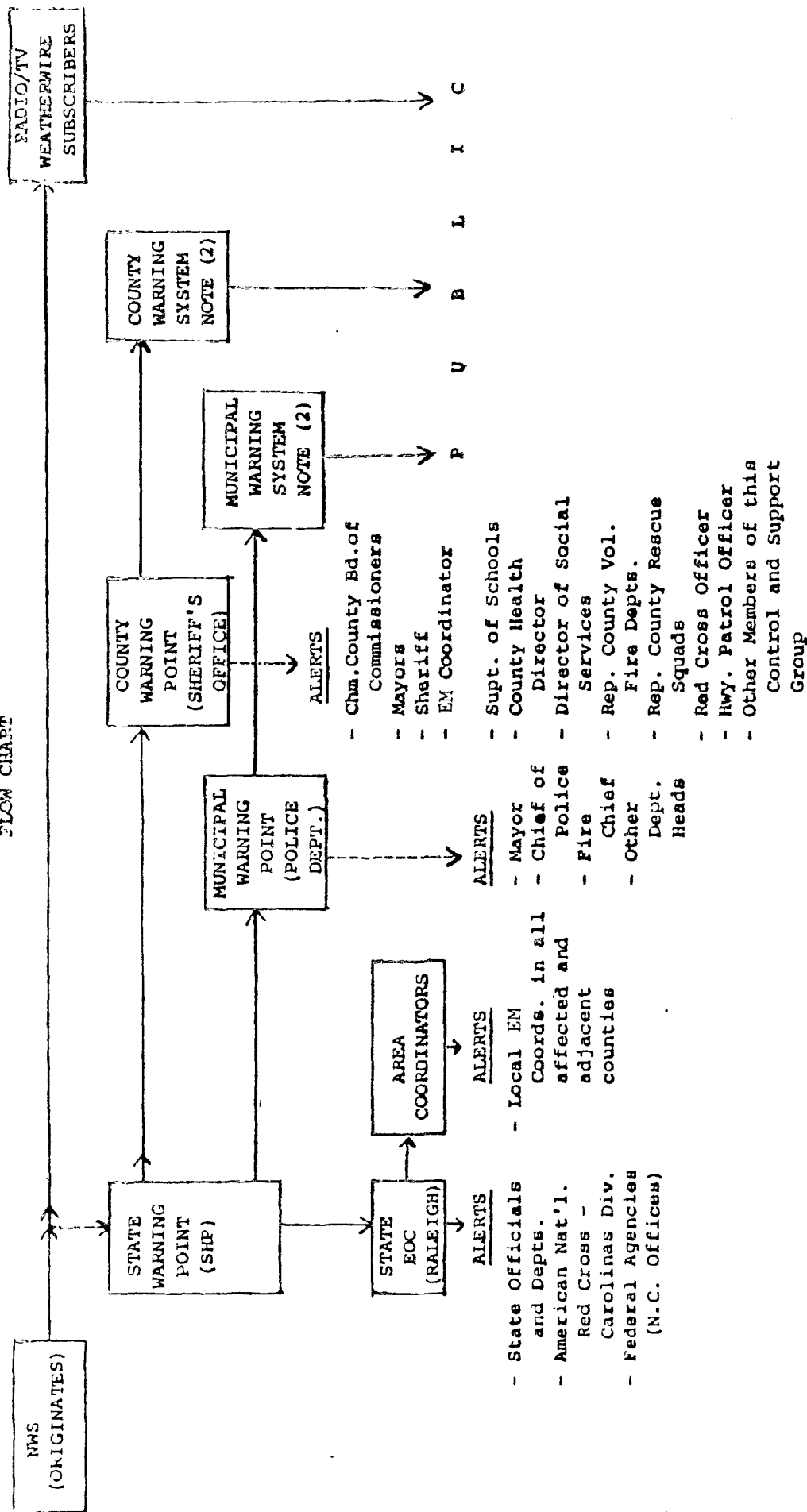
\_\_\_\_\_  
Mayor, Burgaw

\_\_\_\_\_  
Mayor, Atkinson

CONTROL GROUP  
LINE OF SUCCESSION

<u>PRIMARY MEMBER</u>	<u>1ST ALTERNATE</u>	<u>2ND ALTERNATE</u>	<u>3RD ALTERNATE</u>
1. Gordon Jones Chairman P. O. Box 336 Burgaw, NC 28425 259-4460	Cecil Eakins Vice Chairman Rt. 1, Box 324 Ivanhoe, NC 28447 283-5610	Willie B. Nixon Commissioner P. O. Box 454 Burgaw, NC 28425 259-2843	Bonnie W. Parker Commissioner Rt. 1, Box 328 Rocky Pt., NC 28457 259-4209
2. Joseph Paliotti Surf City Mayor Rt. 1, Box 196 Holly Ridge, NC	Robert A. King Mayor Pro Tem P. O. Box 17 Surf City, NC	Donald Helms Councilman P. O. Box 455 Surf City, NC	Douglas Thomas Councilman Rt. 1, Box 91 Holly Ridge, NC
3. Milton Oppegaard Topsail Beach Mayor P. O. Box 31 Topsail Beach, NC	William Best Mayor Pro Tem P. O. Box 164 Topsail Beach, NC	Bill Godwin Commissioner P. O. Box 10 Topsail Beach, NC	Harold Hanig Commissioner P. O. Box 149 Topsail Beach, NC
4. Charles Harrell Burgaw Mayor P. O. Box 235 Burgaw, NC	Gordon Futch Mayor Pro Tem P. O. Box 221 Burgaw, NC	Lloyd Bellamy Commissioner P. O. Box 241 Burgaw, NC	Carlton Harrell Commissioner P. O. Box 186 Burgaw, NC
5. Jack Turner Atkinson Mayor P. O. Box 56 Atkinson, NC	Mickey Langston Mayor Pro Tem P. O. Box 72 Atkinson, NC	Wayne Applewhite Commissioner Rt. 1, Box 7 Atkinson, NC	John Ray, Jr. Commissioner P. O. Box 186 Atkinson, NC
6. George Wright Sheriff P. O. Box 125 Burgaw, NC 259-2334 259-9191	F. Eugene Kelly Chief Deputy P. O. Box 125 Burgaw, NC	Danny DelloBuono Chief Deputy P. O. Box 125 Burgaw, NC	Leroy J. Shepard Captain P. O. Box 125 Burgaw, NC
7. Jerry D. Randall EM Coordinator Rt. 2, Box 37-G Hampstead, NC 28443 259-2629 270-2432			

# WARNING AND ALERTING FLOW CHART



- NOTES**
- (1) County and municipal warning systems disseminate warnings to the public by use of radio/tv bulletins, newspaper extras, handbills, signs, loud speakers or other aural systems, and door to door. Law enforcement, rescue squads and volunteer citizens organizations used to spread warnings when activated by the control group.
  - (2) Warnings relayed by PIN. Where no terminal, passed by phone/radio from nearest terminal by agreement.
  - (3) County and municipal warning systems disseminate warnings to the public by use of radio/tv bulletins, newspaper extras, hand bills, signs, loud speaker or other aural systems, and door to door. Law enforcement rescue squads and volunteer citizens organizations used to spread warnings when activated by the control group.



## ATTACHMENT 3

<div>AGENCY</div> <div>INCREASED READINESS ACTION</div>	<div>SHERIFF</div> <div>Responsibilities:</div> <ul style="list-style-type: none"> <li>- Direction &amp; control of evacuation and reentry operations.</li> <li>- Operate County Warning System.</li> <li>- Serves as liaison officer for all law enforcement agencies within the county.</li> <li>- Ensure communication between Control and Support Groups, Shelter and Traffic Control Points</li> </ul>	<div>DIRECTOR OF SOCIAL SERVICES</div> <div>Responsibilities:</div> <ul style="list-style-type: none"> <li>- Overall shelter operations.</li> <li>- Provides personnel to assist in operation of shelters and registration of evacuees.</li> </ul>
CONDITION 5 BEGINNING OF HURRICANE SEASON		
CONDITION 4 HURRICANE ADVISORY	<ol style="list-style-type: none"> <li>1. Provide notice to Control and Support Groups.</li> <li>2. Review plans and procedures.</li> </ol>	
CONDITION 3 36 to 48 HOURS OR HURRICANE WATCH	<ol style="list-style-type: none"> <li>1. Notify Control and Support Group members that Hurricane Watch issued.</li> <li>2. Gas up all vehicles.</li> <li>3. Check all equipment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Make initial contact with Red Cross to insure that shelter requirements will be satisfied.</li> </ol>
CONDITION 2 18 to 24 HOURS OR HURRICANE WARNING	<ol style="list-style-type: none"> <li>1. Notify Control and Support Groups that Hurricane Warning issued.</li> <li>2. Mobilize personnel.</li> <li>3. Finalize plans to direct evacuation if ordered.</li> <li>4. Assist motorists presently evacuating voluntarily.</li> <li>5. Representative man EOC.</li> </ol>	<ol style="list-style-type: none"> <li>1. Assign personnel to shelters.</li> <li>2. Coordinate with and assist Red Cross representative.</li> </ol>
CONDITION 1 LESS THAN 24 HOURS EVACUATION	<ol style="list-style-type: none"> <li>1. Vehicles with loudspeakers to areas in which evacuation ordered.</li> <li>2. Patrol evacuated area.</li> <li>3. Coordinate provision of communications between shelters, checkpoints and EOC.</li> <li>4. Move stragglers and stay-behinds to best available shelters where possible.</li> </ol>	<ol style="list-style-type: none"> <li>1. Provide personnel to assist with shelter registration</li> </ol>
CONDITION 0 "LAND FALL"	<ol style="list-style-type: none"> <li>1. Secure evacuated areas as best as conditions permit.</li> </ol>	
REENTRY	<ol style="list-style-type: none"> <li>1. Prevent looting.</li> <li>2. Check personnel and equipment. Request needed assistance.</li> <li>3. Control access to evacuated areas.</li> <li>4. Maintain liaison with other law enforcement agencies.</li> </ol>	<ol style="list-style-type: none"> <li>1. Continue to assist Red Cross as needed.</li> </ol>

NOTE: These are representative actions. The increased readiness action checklist for your plan should contain the degree of detail necessary to insure smooth operation of the plan.

# INCREASED READINESS ACTION CHECKLIST

<p>SUPERINTENDENT OF SCHOOLS</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> <li>- Provide facilities to be used as shelters.</li> <li>- Provide personnel to assist in operation of shelters.</li> <li>- Provide school bus transportation when requested.</li> </ul>	<p>COUNTY HEALTH DIRECTOR</p> <p>Responsibility:</p> <ul style="list-style-type: none"> <li>- Insure that health and medical needs are provided during evacuation, shelter and reentry.</li> </ul>	<p>COUNTY FINANCE OFFICER</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> <li>- Maintain financial data.</li> <li>- Adapt accounting system to provide emergency expenditure information upon request.</li> </ul>
	<ol style="list-style-type: none"> <li>1. Update hurricane evacuation plan.</li> <li>2. Check warning system and insure notification rosters are current.</li> <li>3. Insure that shelters are designated IAW Red Cross Agreement and plans to operate.</li> <li>4. Release general hurricane information to public.</li> <li>5. Conduct exercise to test entire plan.</li> </ol>	
<ol style="list-style-type: none"> <li>1. Review plans and procedures and alert personnel.</li> <li>2. Coordinate preparations as necessary.</li> </ol>		
<ol style="list-style-type: none"> <li>1. Make initial contact with Red Cross on using existing schools as shelters as planned.</li> </ol>		
<ol style="list-style-type: none"> <li>1. Close schools, send pupils home if schools in session.</li> <li>2. Mobilize personnel and assign them to designated shelters.</li> <li>3. Conduct joint inspection of designated shelters with Red Cross representative.</li> <li>4. Representative man EOC.</li> </ol>	<ol style="list-style-type: none"> <li>1. Mobilize personnel.</li> <li>2. Representative man EOC.</li> <li>3. Insure adequate health personnel in shelters.</li> <li>4. Insure shelters are maintained in a sanitary condition.</li> <li>5. Report pertinent health information to officials.</li> </ol>	<ol style="list-style-type: none"> <li>1. Record all expenditures relating to hurricane in separate accounts.</li> <li>2. Representative man EOC.</li> </ol>
<ol style="list-style-type: none"> <li>1. As Red Cross volunteers, assist in the operation of the shelter.</li> </ol>		
<ol style="list-style-type: none"> <li>1. Provide personnel to assist in the operation of shelters.</li> </ol>	<ol style="list-style-type: none"> <li>1. Evaluate and provide to the Control Group a recommendation on the health aspects of reentry into damaged areas.</li> </ol>	<ol style="list-style-type: none"> <li>1. Assemble personnel.</li> <li>2. Provide financial data on emergency expenditures to Control Group.</li> </ol>

COUNTY TAX SUPERVISOR Responsibility: - - Conduct Damage Assessments. -	REPRESENTATIVE - VOL. FIRE DEPARTMENTS Responsibilities: - Coordinate fire fighting support throughout the county (volunteer). - Assist sheriff upon request.	REPRESENTATIVE - VOL. RESCUE SQUADS Responsibilities: - Coordinate provision of rescue operations. - Provide ambulance service to transport non-ambulatory persons.	AMERICAN NATIONAL RED CROSS - LOCAL CHAPTER Responsibilities: - Operate designated Red Cross shelters. - Provide other Red Cross assistance.
shelters are current.			/
			/
			/
	1. Gas up all vehicles. 2. Check all equipment.	1. Gas up all vehicles. 2. Check all equipment.	1. Mobilize personnel. 2. Designate & assign personnel to specific shelters.
1. Representative man EOC.	1. Mobilize personnel. 2. Render assistance as requested. 3. Coordinate fire fighting activities.	1. Mobilize personnel. 2. Move nonambulatory persons and provide other assistance as requested. 3. Coordinate rescue operations.	1. Brief shelter managers. 2. Conduct joint inventory of shelters with school officials. 3. Representative man EOC. 4. Upon EOC direction, open & operate shelters. 5. Keep EOC informed of shelter situation.
1. Assemble personnel. 2. Conduct damage assessment. 3. Furnish damage assessment data to EOC. 4. Review property records.	1. Render assistance as requested.	1. Conduct rescue operations. 2. Inform control group of unmet personnel and equipment needs.	1. Operate shelters as long as necessary. 2. Render assistance to needy persons.

# FLOW CHART





## Instructions for Evacuees

When you are directed to evacuate, follow these instructions carefully.

1. If you are directed to evacuate, follow these instructions carefully.

2. If you are directed to evacuate, follow these instructions carefully.

3. If you are directed to evacuate, follow these instructions carefully.

4. If you are directed to evacuate, follow these instructions carefully.

5. If you are directed to evacuate, follow these instructions carefully.

6. If you are directed to evacuate, follow these instructions carefully.

7. If you are directed to evacuate, follow these instructions carefully.

8. If you are directed to evacuate, follow these instructions carefully.

9. If you are directed to evacuate, follow these instructions carefully.

10. If you are directed to evacuate, follow these instructions carefully.

11. If you are directed to evacuate, follow these instructions carefully.

12. If you are directed to evacuate, follow these instructions carefully.

13. If you are directed to evacuate, follow these instructions carefully.

14. If you are directed to evacuate, follow these instructions carefully.

15. If you are directed to evacuate, follow these instructions carefully.

16. If you are directed to evacuate, follow these instructions carefully.

17. If you are directed to evacuate, follow these instructions carefully.

18. If you are directed to evacuate, follow these instructions carefully.

19. If you are directed to evacuate, follow these instructions carefully.

20. If you are directed to evacuate, follow these instructions carefully.

21. If you are directed to evacuate, follow these instructions carefully.

22. If you are directed to evacuate, follow these instructions carefully.

23. If you are directed to evacuate, follow these instructions carefully.

24. If you are directed to evacuate, follow these instructions carefully.

25. If you are directed to evacuate, follow these instructions carefully.

26. If you are directed to evacuate, follow these instructions carefully.

27. If you are directed to evacuate, follow these instructions carefully.

28. If you are directed to evacuate, follow these instructions carefully.

29. If you are directed to evacuate, follow these instructions carefully.

30. If you are directed to evacuate, follow these instructions carefully.

31. If you are directed to evacuate, follow these instructions carefully.

32. If you are directed to evacuate, follow these instructions carefully.

33. If you are directed to evacuate, follow these instructions carefully.

34. If you are directed to evacuate, follow these instructions carefully.

35. If you are directed to evacuate, follow these instructions carefully.

36. If you are directed to evacuate, follow these instructions carefully.

37. If you are directed to evacuate, follow these instructions carefully.

38. If you are directed to evacuate, follow these instructions carefully.

39. If you are directed to evacuate, follow these instructions carefully.

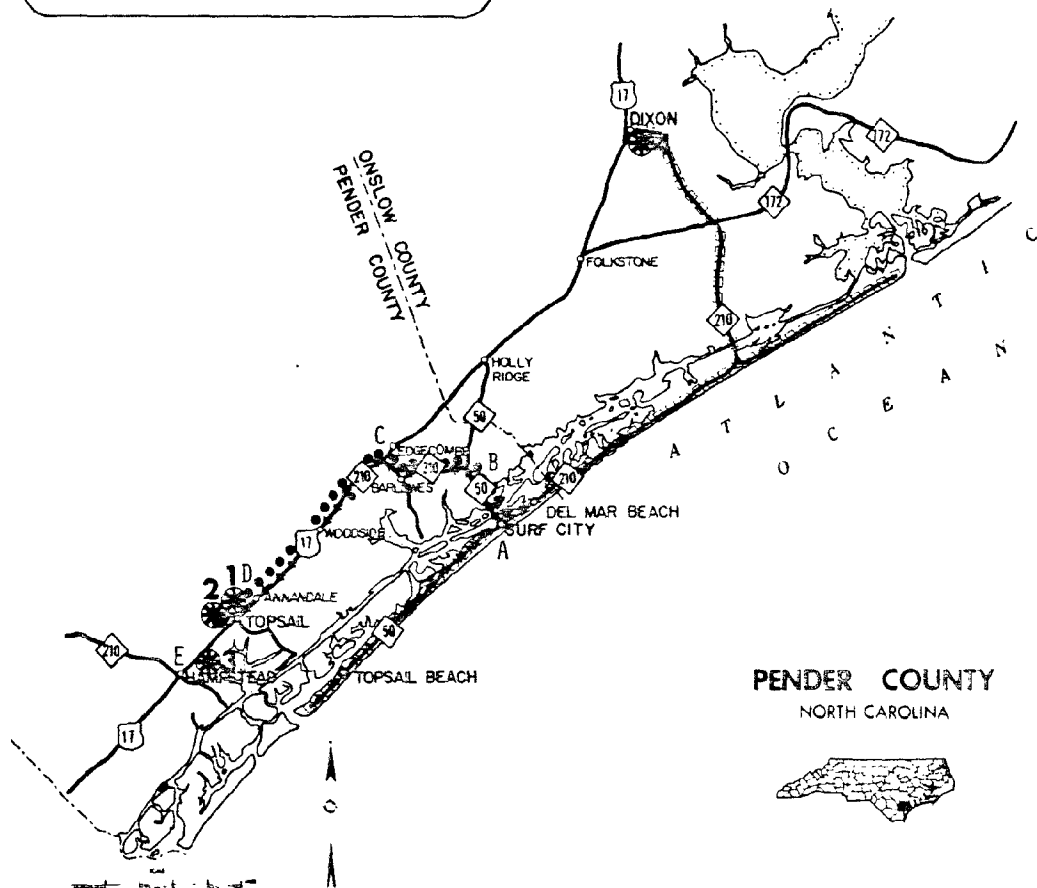
40. If you are directed to evacuate, follow these instructions carefully.

## Hurricane Evacuation Routes and Shelters

AREA	ROUTE	SHELTER	SHELTER #
<b>If Crowbridge at Surf City is passable</b>			
Topwell Beach, Surf City and Del Mar Beach	East on S.C. 50, left on S.C. 210, left on U.S. 17.	Topwell High School or Topwell Elementary School (These schools are co-located. Follow directions of traffic control personnel at shelter)	1 2
<b>If Crowbridge is not passable</b>			
Topwell Beach, Surf City and Del Mar Beach	East on S.C. 50, to S.C. 210, turn right on 210 to Dixie	Dixon High School (in Onslow County)	3
Residence of County at Large	Best available route	Topwell High School, Topwell Elementary School, Dixon High School	1 2 3
<b>NOTE:</b> Shelter # 3, Topwell Junior High School, located in Hampstead will be used only if Topwell High School and Topwell Elementary School are filled to capacity.			

Stay tuned to radio stations WFSB 1470 (AM) or WNCN 105.9 (FM) for the latest shelter instructions.

Questions should be directed to the Pender County Civil Preparedness Coordinator, P.O. Box 23, Burgaw, N.C. 28423 (Phone: 259-2529).



DATE \_\_\_\_\_

TIME \_\_\_\_\_ AM \_\_\_\_\_ PM \_\_\_\_\_

EBS ANNOUNCEMENT  
FOR IMMEDIATE BROADCAST

Gordon Jones, Chairman of the Pender County Board of Commissioners, has announced that due to the approach of Hurricane \_\_\_\_\_ evacuation is being recommended for the barrier islands and low-lying areas of Pender County, effective immediately. The areas which are in particular danger are all of Topsail Island (including Surf City, Topsail Beach and Del Mar Beach) and low-lying areas adjacent to the Intracoastal Waterway. Persons in these areas should immediately evacuate and move well inland. Shelters are being established at the following school locations:

1. Topsail High School
2. Topsail Elementary School
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

The shelters are being opened with the assistance of the American Red Cross and will provide shelter and food.

The chairman pointed out that although the shelters are being opened, space is extremely limited and a visit with friends or relatives, or staying in a motel or hotel well inland would be a good idea. Fast Food restaurants and gas stations in the area have been requested to remain open as long as possible to provide service to those individuals who plan to evacuate. Also, he said that pets, firearms, and alcoholic beverages will

not be allowed in the shelters. Pets should be left in an animal shelter, animal hospital or other safe place.

Jerry D. Randall, Emergency Management Coordinator for Pender County, said that all persons coming to the shelters should bring bedding, special medicines and foods, including foods for babies, and flashlights.

NOTE: RADIO AND TELEVISION STATIONS PLEASE REPEAT AT 15 MINUTES INTERVALS.



## ATTACHMENT 7 - HURRICANE EVACUATION DECISION PROCEDURE

- I. GENERAL - Shown below is the procedure to be followed and factors to be considered when preparing recommendations or making decisions regarding hurricane evacuation and will be used with Tab D (Evacuation Decision Worksheet).
- II. PROCEDURE - Pender County, in conjunction with the State Division of Emergency Management, will follow the procedure shown below in order to determine the need for evacuation of Topsail Island and other low-lying areas of the county.
  - A. Obtain the estimated point of and time of landfall and category of the storm by contacting the National Weather Service. If this point crosses or comes within 100 miles of the North Carolina coast take the following action. Complete items 1 and 2 on Tab D.
  - B. Determine the threatened coastal area; this is the area defined in the advisory as being under either a hurricane watch or hurricane warning. Complete item 3 of Tab D.
  - C. Go to Tab A - Pender County Hurricane Evacuation Time Study and using the area defined in B. above, identify the maximum total two-way evacuation time within the defined area. Add three (3) hours to this time if evacuation will take place during hours of darkness. If the storm is Category 5, add an additional hour. See Tab B - Saffir/Simpson Scale. Place this total figure in item 4 of Tab D.
  - D. Compute the number of hours until predicted landfall using the information obtained in A above. Subtract four (4) hours to allow for forecast uncertainty. Place this total figure in item 5, Tab D.
  - E. Determine if evacuation can be carried out safely by comparing the adjusted time until predicted landfall (D above) with the time required for evacuation (C above). Check yes or no on item 6 on Tab D.
  - F. Using the number of hours to predicted landfall (D above) refer to the Table 1, Column 1, and select the forecast period closest to, but greater than, the number of hours to landfall. Check yes or no on items 7a and 7b of Tab D.

G. Complete items 8 through 11 on Tab D.

TABLE 1. MAXIMUM PROBABILITY VALUES WITHIN FORECAST PERIODS

<u>Column 1</u> <u>FORECAST PERIOD</u>	<u>Column 2</u> <u>MAXIMUM PROBABILITY VALUES</u>
72 hours	10%
48 hours	13%
36 hours	20%
24 hours	35%
12 hours	60%

- H. Any decision to recommend or order evacuation must to made before the time until landfall is less than the time required for evacuation, otherwise the evacuees will not have time to clear the hazard area prior to the arrival of gale force winds or the evacuation routes become impassible.
- I. SUBSEQUENT PROBABILITIES. The actions taken and factors considered above should be repeated each time the National Weather Service issues an advisory containing storm probabilities for landfall. (See Tab C to this Appendix.)

# TAB A - PENDER COUNTY EVACUATION TIME STUDY

I. The information shown in the table below was provided by the Planning and Research Branch of the Division of Highways, North Carolina Department of Transportation. The times shown represent the time required after warning has been received. Total evacuation time is shown for one way (both lanes used to evacuate) and two way (one lane used for evacuation) traffic. The times shown are for the evacuation of the barrier islands only.

A. The components of total evacuation time are defined as follows:

1. Mobilization Time - time required for preparation to begin evacuation.
2. Travel Time - time required to clear the barrier islands not including queuing delay time (bottle necks).
3. Queuing Delay Time - delay time created when traffic demand exceeds the capacity of the evacuation route.
4. Hazards Time - the time difference between the arrival of gale force winds, heavy rain and flooding, and the time when the eye of the hurricane arrives.

B. Some of the more important assumptions used in compiling this information are as follows:

1. Average auto occupancy is 2.5 persons per vehicle.
2. Twenty percent of the evacuees leave before the order is given.
3. Manned traffic control points have been established.
4. Contraflow traffic is negligible compared to evacuation traffic.
5. Peak population estimates were used in making the evacuation time estimates.
6. The approach of a category 4 storm was hypothesized.
7. Evacuation is assumed to occur during daylight hours.

PENDER COUNTY TOPSAIL ISLAND	HAZARD TIME	MOBILIZATION TIME	TRAVEL TIME	QUEUING DELAY TIME	TOTAL TIME (ONE WAY)	TOTAL TIME (TWO WAY)
Surf City, Topsail Beach, Del Mar Beach	3-5	3.5	.5	2	9-11	10-12

NOTE: Times are expressed in hours.

TAB B - SAFFIR/SIMPSON HURRICANE SCALE

CATEGORY	CENTRAL PRESSURE		WINDS	SURGE	DAMAGE
	MILLIBARS	INCHES	MPH	(FT)	
1	>980	>28.94	74-95	4-5	Minimal
2	965-979	28.50-28.91	96-110	6-8	Moderate
3	945-964	27.91-28.47	111-130	9-12	Extensive
4	920-944	27.17-27.88	131-155	13-18	Extreme
5	<920	<27.17	>155	>18	Catastrophic

The Saffir/Simpson Hurricane Scale gives probable property damage and evacuation recommendations as follows:

Scale No. 1 - Winds of 74 to 95 miles per hour. Damage primarily to shrubbery, trees, foliage and unanchored mobile homes. No real damage to other structures. Some damage to poorly constructed signs.

Or: Storm Surge 4 to 5 feet above normal. Low-lying coastal roads inundated; minor pier damage, some small craft in exposed anchorages torn from moorings.

Scale No. 2 - Winds of 96 to 110 miles per hour. Considerable damage to shrubbery and tree foliage, some trees blown down. Major damage to exposed mobile homes. Extensive damage to poorly constructed signs. Some damage to roofing materials of buildings; some window and door damage. No major damage to buildings.

Or: Storm surge 6 to 8 feet above normal. Considerable damage to piers. Marinas flooded. Small craft in unprotected anchorages torn from moorings. Evacuation of some shoreline residences and low-lying inland areas required.

Scale No. 3 - Winds of 111 to 130 miles per hour. Foliage torn from trees, large trees blown down. Practically all poorly constructed signs blown down. Some damage to roofing materials of buildings; some window and door damage. Some structural damage to small buildings. Mobile homes destroyed.

Or: Storm Surge 9 to 12 feet above normal. Serious flooding at coast and many smaller structures near coast destroyed; larger structures near coast damaged by battering waves and floating debris. Flat terrain 5 feet or less above sea level flooded inland 8 miles or more. Evacuation of low-lying residences within several blocks of shoreline possibly required.

Scale No. 4 - Winds of 131 to 155 miles per hour. Shrubs and trees blown down; all signs down. Extensive damage to roofing materials, windows and doors. Complete failure of roofs on many small residences. Complete destruction of mobile homes.

Or: Storm Surge to 13 to 18 feet above normal. Flat terrain 10 feet or less above sea level flooded inland as far as 6 miles. Major damage to lower floors of structures near shore due to flooding and battering by waves and floating debris. Major erosion of beaches. Massive evacuation of all residences within 500 yards of shore possibly required, and of single-story residences on low ground within 2 miles of shore.

TAB B CON'T.

Scale No. 5 - Winds greater than 155 miles per hour. Shrubs and trees blown down, considerable damage to roofs of buildings; all signs down. Very severe and extensive damage to windows and doors. Complete failure of roofs on many structures and industrial buildings. Extensive shattering of glass in windows and doors. Some complete building failures. Small buildings overturned or blown away. Complete destruction of mobile homes.

Or: Storm surge greater than 18 feet above normal. Major damage to lower floors of all structures less than 15 feet above sea level within 500 yards of shore. Massive evacuation of residential areas on low ground within 5 to 10 miles of shore possibly required.

## TAB C - INTERPRETING HURRICANE AND TROPICAL STORM PROBABILITIES

I. Probabilities of hurricane conditions are now included in public tropical storm and hurricane advisories issued by the National Weather Service. The probabilities are to assist officials who must make critical evacuation decisions hours before a hurricane warning can be issued. The probabilities will also be of value to coastal and offshore industries.

II. The probabilities describe in percentages the chance that a storm's center will pass within about 65 miles of 44 selected locations from Brownsville, Texas to Eastport Maine. In North Carolina and neighboring states...probabilities are issued for Myrtle Beach..Wilmington..Morehead City..Cape Hatteras..and Norfolk.

III. During a hurricane...or tropical storm..the probabilities will be included in the advisories issued by the National Hurricane Center in Miami as early as 72 hours before a storm is forecasted to make landfall.

IV. The hurricane probabilities should not be compared with rainfall probabilities which can approach 100 percent. Hurricane probabilities will not be more than about 10 percent at 72 hours..13 to 18 percent at 48 hours...and 20 to 25 percent at 36 hours before forecasted landfall. The numbers will increase rapidly to 35 to 40 percent about 24 hours before landfall and to 60 to 70 percent about 12 hours before landfall.

V. In assessing ones risk...coastal residents should compare the probability figure for their location with those of neighboring locations. Those areas with higher probabilities are under a greater threat from an advancing hurricane.

VI. In addition...coastal residents should be aware of increasing probabilities. Locations with increasing probabilities are at a greater risk than locations with stable or decreasing probabilities.

VII. The following page is a sample Probability Table.

CHANCES OF CENTER OF DEAN PASSING WITHIN 65 MILES OF  
LISTED LOCATIONS THROUGH 2 AM EDT SUN OCT 2 1983

### ADDITIONAL PROBABILITIES

X MEANS LESS THAN ONE PERCENT

# TAB D - EVACUATION DECISION WORK SHEET

DATE \_\_\_\_\_ TIME \_\_\_\_\_

This worksheet will be completed each time an advisory containing storm landfall probabilities (See Tab C) is issued.

1. The estimated time of landfall is \_\_\_\_\_.

2. The estimated point of landfall is \_\_\_\_\_.

3. The threatened area is from \_\_\_\_\_ to \_\_\_\_\_.

4. The total evacuation time (including safety factors) (computed in paragraph IIC page 7-1) is \_\_\_\_\_ hours.

5. The time until landfall (computed in paragraph IID) is \_\_\_\_\_ hours.

Check One

6. Is there time to evacuate?      yes      no  
   ☐      ☐

7. Do storm probabilities indicate evacuation?

a. Is forecast probability approaching the maximum probability value in Table 1, Column 2 (if forecast probability matches or exceeds the probability in Table 1, give even stronger consideration to evacuation.)

and

b. Is evacuation time greater than or approaches the next forecast period (Table 1, Column 1)?

c. If a and b above are yes, consider evacuation after considering items below:

8. Other factors to consider.

	yes	no
a. Is the storm above Category 1 (See Tab B-Saffir/Simpson Scale)?	<input type="checkbox"/>	<input type="checkbox"/>
b. Has NWS issued a hurricane warning?	<input type="checkbox"/>	<input type="checkbox"/>
c. Do current NWS storm surge predictions indicate inundation of populated areas?	<input type="checkbox"/>	<input type="checkbox"/>
d. Do road and weather conditions permit evacuation?	<input type="checkbox"/>	<input type="checkbox"/>
e. Will ferrys that are needed for evacuation be able to stay in operation long enough to complete evacuation?	<input type="checkbox"/>	<input type="checkbox"/>
f. Are drawbridges prepared to allow vehicular traffic only?	<input type="checkbox"/>	<input type="checkbox"/>
g. Is there a large tourist population in the threatened area at this time?	<input type="checkbox"/>	<input type="checkbox"/>



Tab D Cont'd.

- |   |           |          |
|---|-----------|----------|
| h. Have traffic control points on evacuation routes been staffed<br>(or can they be staffed prior to evacuation)? | yes<br>[] | no<br>[] |
| i. Have local governments in threatened areas already ordered or<br>recommended evacuation?                       | []        | []       |
| j. Can shelters be opened and staffed prior to evacuation?  | []        | []       |
| k. Will critical bridges in the threatened areas be passable during<br>evacuation (Tab E)?                        | []        | []       |
9. The larger the number of yes blocks which have been checked above ; the more  
evacuation should be considered. Answer the question below.
10. Should evacuation of threatened area be:
- |             |    |    |
|-------------|----|----|
| recommended | [] | [] |
| ordered     | [] | [] |
11. When should evacuation start? \_\_\_\_\_

